

MMLS System Level Test Equipment Required

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According to the Government procurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS system.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
Attenuator, Variable	Narda 794FM
Azimuth Field Monitor Test Fixture	Textron Defense Systems (TDS)
Coupler	Narda 3042B-20
DME Interrogatory or AN/ARN-118	TDS
Inclinometer	Hilger Watts TB103-1
Instrument System (interface)	Colorado Data Systems 63B-IBX
Logic Analyzer	Hewlett Packard (HP) 16500A
MLS Receiver	Honeywell ML-850
MMLS Data Acquisition and Storage	Bell
Oscilloscope	Leader LBO-51B
RF Detector	HP 8471A
Spectrum Analyzer	HP 8566B
Volmeter	Fluke 8502A
Amplifier, C-Band	Watkins Johnson CTRA62

Azimuth Antenna Test Equipment Required

According to the Government procurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS Azimuth Antenna.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
Compact Antenna Range	Scientific Atlanta 2083A
Frequency Counter	EIP 578
Network Analyzer	HP 8510
Oscilloscope	Tektronix 2465A
Standard Gain Horn (SGH)	Scientific Atlanta 12-3.95
Computer	HP D1430A
Monitor	HP 35731A
Power Supply	Lambda LPT-7202-FM
Interface Box	Bell Aerospace-Textron (BAT) 175137
Phase Shifter Board	BAT
Counter Timer Board	Metrabyte PI024
Digital Multimeter (DMM)	Simpson 464
Phase Shifter Control Unit (PSCU)*	

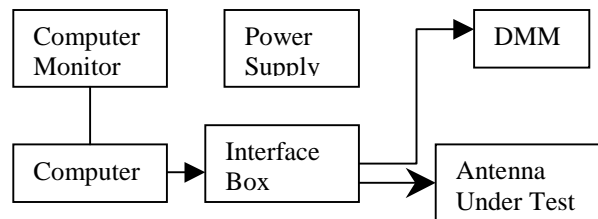
Elevation Antenna Test Equipment Required

According to the Government procurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS Elevation Antenna.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
Compact Antenna Range	Scientific Atlanta 2083A
Frequency Counter	EIP 578
Network Analyzer	HP 8510

Oscilloscope	Tektronix 2465A
Standard Gain Horn (SGH)	Scientific Atlanta 12-3.95
Computer	HP D1430A
Monitor	HP 35731A
Power Supply	Lambda LPT-7202-FM
Interface Box	Bell Aerospace-Textron (BAT) 175137
Phase Shifter Board	BAT
Counter Timer Board	Metrabyte PI024
Digital Multimeter	Simpson 464
Phase Shifter Control Unit (PSCU)*	

* The PSCU provides phase shifter commands to steer the antenna beam to different angles. The angles are multiples of 0.36 degrees for the azimuth antenna and 0.38degrees for the elevation antenna. The beam can either be held stationary at a particular angle or swept repetitively over the coverage sweep at the operational scan rate. At any discrete angle, there are 64 different phase shifter settings which give that angle within +/-0.1 degrees. These pashe shifter setting are identical to those generated by a real CEU. The PSCU also generates the phase shifter commands that develop the wide coverage Date Beam. A block diagram of the PSCU is shown below.



Field Monitor Test Equipment Required

According to the Government reprocurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS Field Monitor.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
Oscilloscope	Tektronix 2236
Power Supply	HP 6289A
Signal Generator	Watkins Johnson WJ-1204-1
SGH	Scientific Atlanta 12-3.95
Power Meter	HP

CEU Test Equipment Required

According to the Government reprocurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS CEU.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
<u>Main Instruments</u>	
Vetra PC	HP D1422A
Monitor	HP 35731A
Thinkjet Printer	HP 2225C
Interface Test Adapter	HP 3235A
<u>IEEE Instruments</u>	
Digital Multimeter	HP 3478A
Power Supply	HP 6032A
Power Supply	HP 6621A
Power Supply	HP 6622A

Power Supply	HP 6624A
Power Supply	CI 948XP
Current Monitor	CI IM1C
Controller	CI 971XL-CI
Function Generator	HP 3314A
Data Word Generator	HP 8175A
Signal Generator	Wavetek 2520
Attenuator Controller	HP 11713A
Spectrum Analyzer	HP 8566B
Oscilloscope	HP 54100D
Logic Analyzer Spectrum	HP 16500A
Logic Module	HP 16510A
Power Meter	HP 438A
Time Interval Counter	HP 5370B
CW Synthesizer	HP 8672B
<u>CEU Simulator Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
<u>Plug in Boards</u>	
Manchester Encoder	BAT
Phase Shifter	BAT
Counter Timer Metrabyte	P/O-24
<u>RCDU, DEU, AZ/EL Antenna Simulator Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
<u>Plug in Boards</u>	
Manchester Encoder	BAT
D/A Converter	Metrabyte DDA-06
Digital I/O	Metrabyte P/O-24

DEU Test Equipment Required

According to the Government reprourement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS DEU.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
<u>Main Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
Thinkjet Printer	HP 2225C
Interface Test Adapter	HP 3235A
<u>IEEE Instruments</u>	
Digital Multimeter	HP 3478A
Power Supply	HP 6032A
Power Supply	HP 6621A
Power Supply	HP 6622A
Power Supply	HP 6624A
Power Supply	CI 948XP
Current Monitor	CI IM1C
Controller	CI 971XL-CI
Function Generator	HP 3314A
Data Word Generator	HP 8175A
Signal Generator	Wavetek 2520
Attenuator Controller	HP 11713A
Spectrum Analyzer	HP 8566B

Oscilloscope	HP 54100D
Logic Analyzer Spectrum	HP 16500A
Logic Module	HP 16510A
Power Meter	HP 438A
Time Interval Counter	HP 5370B
CW Synthesizer	HP 8672B
Variable Attenuator	HP 8496
Variable Attenuator	HP 8494
<u>CEU Simulator Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
<u>Plug in Boards</u>	
Manchester Encoder	BAT
<u>RCDU, DEU, AZ/EL Antenna Simulator Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
<u>Plug in Boards</u>	
Manchester Encoder	BAT
D/A Converter	Metabyte DDA-06
Digital I/O	Metabyte P/O-24

RCDU Test Equipment Required

According to the Government procurement data, the following items, or equivalent, are required in order to adequately perform acceptance test procedures for the MMLS RCDU.

<u>Equipment Item</u>	<u>Manufacturer and Model</u>
<u>Main Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A
Thinkjet Printer	HP 2225C
Interface Test Adapter	HP 3235A
<u>IEEE Instruments</u>	
Digital Multimeter	HP 3478A
Power Supply	HP 6032A
Power Supply	HP 6621A
Power Supply	HP 6622A
Power Supply	HP 6624A
Power Supply	CI 948XP
Current Monitor	CI IM1C
Controller	CI 971XL-CI
Function Generator	HP 3314A
Data Word Generator	HP 8175A
Signal Generator	Wavetek 2520
Attenuator Controller	HP 11713A
Spectrum Analyzer	HP 8566B
Oscilloscope	HP 54100D
Logic Analyzer Spectrum	HP 16500A
Logic Module	HP 16510A
Power Meter	HP 438A
Time Interval Counter	HP 5370B
CW Synthesizer	HP 8672B
<u>CEU Simulator Instruments</u>	
Vectra PC	HP D1422A
Monitor	HP 35731A

Plug in Boards

Manchester Encoder

BAT

RCDU, DEU, AZ/EL Antenna Simulator Instruments

Vectra PC

HP D1422A

Monitor

HP 35731A

Plug in Boards

Manchester Encoder

BAT

D/A Converter

Metabyte DDA-06

Digital I/O

Metabyte P/O-24